DOCUMENT RESUME

ED 076 113 HE 004 023

TITLE	Student Needs, Aspirations, and Accomplishments: Essential Ingredients in State Planning for Postsecondary Education.
INSTITUTION	Kansas State Master Planning Commission, Topeka.
REPORT NO	PP-3
PUB DATE	Mar 72
NOTE	71p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	Colleges; Community Colleges; Educational Needs; *Higher Education; *High School Graduates; Junior Colleges; Master Plans; *Post Secondary Education; *Questionnaires; State Surveys; Statewide Planning; *Student Attitudes; Universities; Vocational Education
IDENTIFIERS	Kansas; *Kansas State Master Planning Commission

ABSTRACT

This report summarizes the findings of the Kansas Master Planning Commission's (MPC) inventory of the educational needs and aspirations of post high school Kansas students. Following introductory material and a determination of educational needs in the state of Kansas, six areas are covered. These areas include a survey of 1971 high school seniors and follow-up of 1968 graduates; description of students attending vocational-technical schools; a comparison of community-junior college students with vocational-technical school students on 131 inventory items; community college graduates; seniors and graduates of Kansas 4-year independent colleges; and a comparison of 4 groups of Kansas community-junior college students. The appendix reviews the legislative charge to the Master Planning Commission. (MJM)

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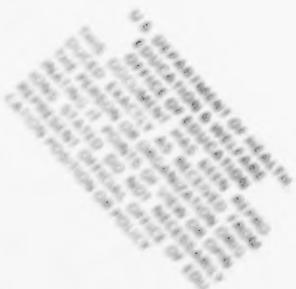
STUDENT NEEDS, ASPIRATIONS, AND ACCOMPLISHMENTS:

ESSENTIAL INGREDIENTS IN STATE PLANNING FOR POSTSECONDARY EDUCATION



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mpc MASTER PLANNING COMMISSION

Planning Report Number 3
March, 1972

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MASTER PLANNING COMMISSION

The Master Planning Commission on Kansas education created by the 1970 Kansas Legislature, met for the first time in April, 1970, in Topeka. Its mission is to prepare the first phase of an educational master plan for Kansas. Such master plan is to outline the goals and objectives of education in Kansas and the first phase shall consist of two parts:

- Middle level public education: the area between the elementary secondary school system and the four year college and university, and
- Private education at two year and four year colleges and universities.

The Legislative charge to the Commission is presented in full in the Appendix.

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This project supported in part by the State Education Commission with funds from the Higher Education Facilities Comprehensive Planning Grant program administered by the Division of Academic Facilities of the U.S. Office of Education.

PREFACE

Educational needs and aspirations of posthigh school Kansas students is an essential ingredient in educational planning. Because of this, the Master Planning Commission undertook to obtain an intensive inventory of student needs and aspirations. The result of eleven surveys and comparisons are summarized in this planning report.

The surveys and comparisons were planned and implemented by Dr. Kenneth E. Anderson, Master Planning Commission Executive Director. He was assisted by two research associates: Dr. Jerome F. Stiemel, Jr. and John P. Hanna. Several of Dr. Anderson's doctoral candidates assisted in the work. They are: Hernan D. Acero, Virgil F. Boatwright, and Dr. George Rogers.

The educational needs and aspirations surveys and comparisons generated a considerable quantity of data which will be used to develop recommendations for the Master Planning Commission final report in October of 1972. This is probably the first time that any state has developed such an extensive inventory of the students attending posthigh school institutions. In order to reduce the data to a more manageable size, this report is limited to a summary of the findings. Questions concerning detailed data not reported herein should be directed to Dr. Anderson.

Wilbur T. Billington, Chairman
Master Planning Commission

INTRODUCTION

In educational planning, the needs and aspirations of the students that the educational system is to serve are of major importance. In creating the Kansas Master Planning Commission, the State Legislature recognized this factor by specifically charging the Commission with the task of projecting "... the educational needs of Kansas students ... in this middle educational level through the mid 1980's."[1] In projecting educational needs, the Commission interpreted the phrase "middle educational level" as the area between the elementary secondary school system and the four year colleges and universities. However, specific reference is made to the independent colleges and universities as follows. "Indicate the impact of the first phase of the master plan on the capability of independent colleges and universities continuing to provide diversity of higher educational opportunities in the state."

Determination of the educational needs of Kansas citizens is only one aspect of the total scope of the Commission's charge. Long-range educational planning requires the consideration of numerous and multi-faceted variables, all of which must be integrated into a total data bank from which recommendations can be formulated and decisions made. The data developed in the "educational needs" phase were designed to meet specific requirements of the study and to support other phases of the Commission's task.

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1 Kansas Legislature, *Senate Concurrent Resolution Number 46*, Kansas State Printing Office, 1970.

DETERMINING EDUCATIONAL NEEDS

In its effort to determine the posthigh school educational needs of Kansas students, the Commission staff decided to develop a battery of surveys to be administered to the various population groups engaged in obtaining an education in the middle educational level. The population groups and types of surveys[2] employed were:

1. Surveys pertaining to high schools:
   (a) 1971 high school seniors
   (b) 1968 high school graduates
2. Surveys pertaining to the area vocational–technical schools:
   (a) 1971 posthigh school students
   (b) 1971 adult–evening students
   (c) 1971 eleventh and twelfth graders attending on a half–day basis
   (d) 1970 students who finished programs of varying lengths
3. Surveys pertaining to independent colleges and universities:
   (a) 1971 seniors
   (b) 1967 graduates
4. Surveys pertaining to public community junior colleges:
   (a) Study of transfers and non transfers to Kansas four–year colleges
   (b) 1970 graduates
5. Comparison of public community junior college students with posthigh vocational–technical school students on 131 survey items.
6. A comparison of four groups of Kansas public community junior college students.

The specific objectives, development of survey instruments, determination of samples, procedures of gathering the data, and progress to date for each of the surveys follow.

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2. These surveys were authorized by the Commission in the August 14, 1970 and October 30, 1970 meetings.

SURVEY OF 1971 HIGH SCHOOL SENIORS AND FOLLOW-UP SURVEY OF 1968 GRADUATES

OBJECTIVES

The aspirations and needs of students who will be entering the middle educational level in the near future have a direct bearing on educational planning. To determine what these needs and aspirations are, the Commission surveyed 1971 Kansas high school seniors. The objectives of this survey included the determination of how many students plan to attend the various kinds of institutions in pursuit of a variety of types of programs. In addition, the instrument was designed to determine why the students planned to attend certain types of institutions, how they planned to finance their education, and where they planned to live while attending school. For those students who did not plan to enter posthigh school institutions, the survey attempted to determine the reasons for non-attendance, the kinds of jobs they hoped to secure, and their interest in further education or training at a later date or under different circumstances.

While the survey of 1971 seniors yielded a profile of student aspirations and intentions, a survey of 1968 Kansas high school graduates was administered to determine what these high school graduates were actually doing at the time. The survey was aimed at determining how many graduates went on to posthigh school educational institutions of varying types and what programs they entered. Also, the purpose was to determine the present activities of those graduates who did not go on to further schooling, and whether or not they had an interest in additional education at a later date.

The two surveys provide the necessary data for a meaningful tie-up with the manpower and student enrollment projections.

DEVELOPMENT OF THE INSTRUMENTS

The survey instruments utilized in the 1971 senior survey and the follow-up survey of 1968 graduates were developed by generating sets of questions directed toward providing information on the objectives stated for each of the surveys. After tentative sets of questions were developed, the survey instruments and sets of objectives were sent to a sample of 25 high school principals and superintendents for recommendations. The 1971 senior survey was also presented to a group of high school seniors to determine the readability of the instructions and questions. The resultant

recommendations were analyzed and incorporated in the instruments. These instruments were then administered to a stratified proportional sample of 1971 high school seniors and 1968 high school graduates.

DETERMINATION OF THE SAMPLE AND THE RETURNS RECEIVED

If the results of administering a questionnaire are to be representative of a population, one has two choices: (1) use the entire population, or (2) use a representative sample of the population. In a state such as Kansas, one has some large senior classes, more medium sized classes, and many more small classes. Too, the geography of Kansas is such that there is great diversity relative to the economy. As an illustration, let us describe two regions as follows.

Far Southwest consisting of thirteen counties (Finney, Grant, Greeley, Hamilton, Haskell, Kearny, Lane, Morton, Scott, Seward, Stanton, Stevens, Wichita). The economy of this region may be described as follows: expanding use of irrigation in agriculture; extreme fluctuation in dryland wheat crops; increasing production of sorghums; range livestock; major natural gas producing area with large reserves; some meat packing and agri- business; population young and increasing in number, especially in urban centers but in rural areas as well.

North Central consisting of eight counties (Clood, Ellsworth, Jewell, Lincoln, Mitchell, Ottawa, Republic, Saline). The economy of this region may be described as follows: corn, cash grain, livestock and general farming; high proportion of population employed in agriculture except Saline County; machinery, metal and clay products; substantial internal migration to cities; stable total population.

It could be argued that seniors in urban areas as contrasted to rural areas have different attitudes, needs, and aspirations relative to the future. Too, seniors in small schools differ in these respects from seniors in large high schools. In light of the above, it appears that a sample that takes into account both size and geography would probably be more representative than a sample of the same size that did not consider these two factors.

In selecting a sample, one must decide on a sampling unit. In this case, the unit used was the senior class. How many senior classes

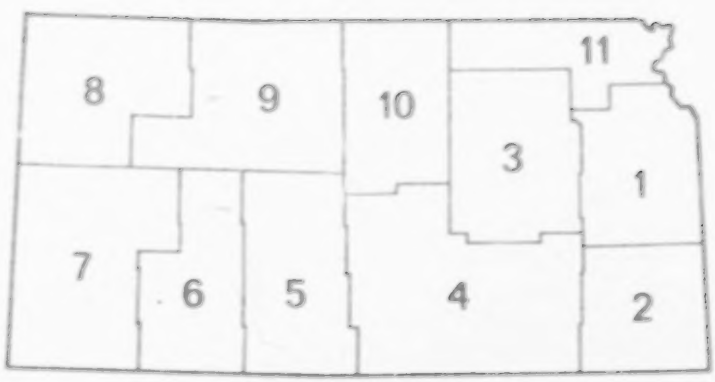
exist in Kansas? An arrival at the answer can as follows:

1. 310 unified school districts in Kansas.
2. Of the 310 districts, four have more than one distinct senior class. These are Wichita (6), Shawnee Mission (5), Kansas City (5), and Topeka (3).
3. 310 − 4 + 19 = 325 senior classes.

Each of the senior classes was assigned to one of the cells appearing in Table 1, which shows the percentages for each of the rows and columns. The regions used were those developed by the Kansas Department of Economic Development. Figure 1 shows the regions.

FIGURE 1

REGIONS AS DEFINED BY THE KANSAS DEPARTMENT OF ECONOMIC DEVELOPMENT



It was decided to use a sample consisting of 108 senior classes or one-third of the total. The distribution of the final sample by size and region appears in Table 1. The exact procedures followed are given in some detail in the first interim report.[3]

Public schools chosen by the method described in the interim report are listed in that report on pages 43–47. Five of the 108 schools chosen did not participate in the 1968 graduate follow-up

3. *Educational Planning to 1985, Interim Report*, December, 1970, pp. 38–42.

TABLE 1

DISTRIBUTION OF 325 SENIOR HIGH SCHOOL CLASSES BY SIZE AND GEOGRAPHIC REGION

	Region												
Size	1	2	3	4	5	6	7	8	9	10	11	N	%
500 & above	9	0	0	7	0	0	0	0	0	1	0	17	5
200 – 499	7	3	3	6	1	1	2	0	1	0	0	24	8
100 – 199	9	8	4	10	4	0	2	2	1	1	5	46	14
Under 100	34	17	19	44	16	16	17	15	23	18	19	238	73
N	59	28	26	67	21	17	21	17	25	20	24	325	
%	18	9	8	21	6.5	5	6.5	5	8	6	7		100

TABLE 2

FINAL SAMPLE

	Region											
Size	1	2	3	4	5	6	7	8	9	10	11	N
500 & above	3	0	0	2	0	0	0	0	0	1	0	6
200 – 499	2	1	1	2	1	1	1	0	1	0	0	10
100 – 199	3	3	1	3	1	0	1	1	1	1	2	17
Under 100	11	5	7	15	5	5	5	5	6	5	6	75
N	19	9	9	22	7	6	7	6	8	7	8	108

TABLE 3

DISTRIBUTION OF 31 SENIOR
NON-PUBLIC HIGH SCHOOL CLASSES
BY SIZE AND GEOGRAPHIC REGION

	Region											
Size	1	2	3	4	5	6	7	8	9	10	11	N
500 & above	0	0	0	0	0	0	0	0	0	0	0	0
200 – 499	3	0	0	0	0	0	0	0	0	0	0	3
100 – 199	1	0	0	3	0	0	0	0	0	0	0	4
Under 100	3	3	2	5	0	1	0	0	2	5	3	24
N	7	3	2	8	0	1	0	0	2	5	3	31

survey. All of the 108 schools chosen did participate in the 1971 senior survey.

The State Department of Education listed 31 non public high schools with a total senior class enrollment of approximately 2,000. Table 3 shows the distribution of the senior classes by size and geographic region. A sample of 33 percent or eleven schools were chosen at random by size and region. Two of the schools did not participate in the 1968 graduate follow–up survey but all eleven schools did participate in the 1971 senior survey. The non public schools chosen are listed in the first interim report on page 48.

When the senior survey instruments were completed, the IBM forms were processed via computer methods. The final sample consisted of 5,530 males and 5,535 females or a total of 11,065. Thus the task of obtaining a stratified proportional sample was completed and the results reported herein may be considered as representative of all the seniors in the State of Kansas in 1971.

The completion of the follow–up survey of 1968 graduates was accomplished through a telephone interview for a percentage of the graduating class in each school, depending on the 1968 graduating class size as follows:

Size 1. Graduating classes of 500 or more 20%
Size 2. Graduating classes of 499 – 200 . . . . . 25%
Size 3. Graduating classes of 199 – 100 . . . . . 33%
Size 4. Graduating classes of 99 or less 50%

These respondents in each sample were chosen by a random selection. This percentage method was chosen over the method of surveying all 1968 graduates in the sample because of time and financial limitations. An attempt was made to contact the following number of students from each of the four categories by size of school: Size 1: 706; Size 2: 652; Size 3: 690; and Size 4: 1,592. The actual returns were: Size 1: 572 or 81 percent; Size 2: 517 or 79 percent; Size 3: 578 or 84 percent; and Size 4: 1,433 or 90 percent. After each school coordinator had completed the instruments, they were returned to the Commission's office and the forms were hand tabulated. The final sample for the 1968 graduate follow–up survey consisted of 1,572 males and 1,528 females or a total of 3,100. The sample obtained may be considered as quite representative of all the 1968 graduates since stratified proportional sampling was used and the principle of randomness was employed throughout.

In attempting to generalize the results for this summary report without regard to classification by size of school, the harmonic mean

was employed to arrive at a percentage which might be called typical of all graduates responding to an item.

THE RESULTS FOR HIGH SCHOOL SENIORS

The results of the analysis were divided into three sections: (1) an analysis for the whole sample for all the items; (2) an analysis by the four sizes of schools for nineteen items; and (3) an analysis by the eleven regions for the same nineteen items. The text of this report, however, is concerned with the analysis for the whole sample for all items and the statements which are made from the results are intended to highlight the findings under four headings: (1) those applicable to all the respondents (11,065); (2) those applicable to respondents who planned to enroll in some type of education or training after graduation (8,196); (3) those applicable to respondents who planned to enter full time employment or become housewives after graduation (2,153); and (4) those respondents who planned to enter military service after graduation (707).

I. Statements Applicable to All Respondents.

1. About 85 percent of the seniors attended only one high school for all their high school years.
2. About 60 percent of the seniors had lived in the school district of their present high school for over ten years whereas about 9 percent had lived in the district less than two years.
3. The male seniors were enrolled in the following programs in the percentages indicated: (1) business education: 5 percent; (2) shop or industrial arts: 18 percent; (3) college preparatory: 31 percent; and (4) general: 39 percent.
4. The female seniors were enrolled in the following programs in the percentages indicated: (1) business education: 17 percent; (2) homemaking: 6 percent; (3) college preparatory: 29 percent; and (4) general: 42 percent.
5. The percentages of seniors who rated themselves in the top one third scholastically of their graduating classes were: (1) males: 29 percent; and (2) females: 33 percent.
6. The percentages of the seniors "satisfied" or "thoroughly satisfied" with their academic achievement in high school were (1) males: 41 percent; and (2) females: 51 percent.
7. About 14 percent of the fathers of the seniors had one or

more college degrees and about another 25 percent had had some college work.

8. About 10 percent of the mothers of the seniors had one or more college degrees and about another 17 percent had had some college work.

9. About 7 percent of the males estimated their high school grade average to be A+, A, or A– as contrasted to about 11 percent for the females.

10. About 40 percent of the males estimated their high school grade average to be B+, B, or B– as contrasted to about 55 percent for the females.

11. About 54 of the males estimated their high school grade average to be C+, C, or D as contrasted to 36 percent for the females.

12. About 31 percent of the students said their parents "expect me to go" to some-kind of school beyond high school and another 52 percent said their parents "want me to go if I want to."

13. After graduation from high school, the males' plans were to: (1) enroll in further education or training: 73 percent; (2) enter full–time employment: 15 percent; and (3) enter military service: 12 percent.

14. After graduation from high school, the females' plans were to: (1) enroll in further education or training: 75 percent; (2) enter full–time employment: 15 percent; (3) become a housewife: 9 percent; and (4) enter military service: 1 percent.

15. The seniors estimated the total income of their parental families as follows: (1) less than $4,000: 4 percent; (2) $4,000 to $8,000: 17 percent; (3) $8,000 to $10,000: 12 percent; (4) $10,000 to $15,000: 19 percent; and (5) over $15,000: 15 percent. About 33 percent had no idea of the total income of their parental families.

16. The top ten occupations or jobs preferred by the males ten years from now were: (1) automotive mechanic: 8 percent; (2) teacher (elementary, secondary, college): 6 percent; (3) farm–ranch operator: 6 percent; (4) engineer (civil, chemical, etc.): 5 percent; (5) lawyer–judge: 4 percent; (6) scientist (agriculture, chemist, biologist, physician, etc.): 4 percent; (7) airplane pilot: 4 percent; (8) farm worker: 3

percent; (9) architect: 3 percent; and (10) computer programmer: 3 percent.

17. The top ten occupations or jobs preferred by the females ten years from now were: (1) homewife (no outside work): 21 percent; (2) teacher (elementary, secondary, college): 14 percent; (3) steno/typist/secretary: 8 percent; (4) nurse (registered): 5 percent; (5) beautician: 5 percent; (6) social welfare worker: 4 percent; (7) airline stewardess: 4 percent; (8) designer/commercial artist: 3 percent; (9) medical technician: 2 percent; and (10) computer programmer: 2 percent.

18. About 85 percent of the males said they planned to further their education or training after high school as contrasted to 80 percent of the females.

II. Statements Applicable to Respondents who Planned to Seek Additional Education or Training After Graduation.

1. About 88 percent of the males and about 87 percent of the females plan to attend a school or college *in Kansas*.

2. The males said they planned to attend schools or colleges *in Kansas* as follows: (1) a public community junior college: 30 percent; (2) a public college or university: 43 percent; (3) a public vocational school: 15 percent; (4) a private two year or four year college or university: 6 percent; and (5) a private business, trade, or vocational school: 6 percent.

3. The females said they planned to attend schools or colleges *in Kansas* as follows: (1) a public community junior college: 27 percent; (2) a public college or university: 43 percent; (3) a public vocational school: 9 percent; (4) a private two year or four year college or university: 9 percent; and (5) a private business, trade, or vocational school: 13 percent.

4. The males said they planned to attend schools or colleges *outside Kansas* as follows: (1) a public community junior college: 10 percent; (2) a public college or university: 49 percent; (3) a public vocational school: 12 percent; (4) a private two year or four year college or university: 16 percent; and (5) a private business, trade, or vocational school: 13 percent.

5. The females said they planned to attend schools or colleges

outside Kansas as follows: (1) a public community junior college: 10 percent; (2) a public college or university: 38 percent; (3) a public vocational school: 8 percent; (4) a private two year or four year college or university: 22 percent; and (5) a private business, trade, or vocational school: 23 percent.

6. The following are the reasons given by the males for planning to attend schools or colleges *outside* of Kansas in rank order: (1) A course of study I cannot get in Kansas; (2) I just do not want to go to school in Kansas; (3) I hope to get an athletic scholarship; (4) I can attend a school outside Kansas for less money; (5) I hope to get an academic scholarship; (6) I want to attend an exclusive school; and (7) I want to attend a church school of my faith.

7. The following are the reasons given by the females planning to attend schools or colleges *outside* of Kansas in rank order: (1) I just do not want to go to school in Kansas; (2) A course of study I cannot get in Kansas; (3) I want to attend a church school of my faith; (4) I can attend a school outside of Kansas for less money; (5) I hope to get an academic scholarship; and (6) I want to attend an exclusive school.

8. The male students planning to attend a two year school said they would enroll in the following programs: (1) university parallel: 40 percent; (2) skilled trades: 28 percent; (3) semi professional or technical: 26 percent; and (4) remedial: 6 percent.

9. The female students planning to attend a two year school said they would enroll in the following programs: (1) university parallel: 36 percent; (2) semi professional or technical: 35 percent; (3) skilled trades: 24 percent; and (4) remedial: 5 percent.

10. The top five choices of fields of study for those males who planned to enroll in "semi professional or technical training" and "skilled trades training" were: (1) a trade field such as auto mechanic, appliance repair, welding, machine, or electrical trades: 32 percent; (2) one of the fields of engineering or industrial technology such as electronics, mechanics, or civil technology: 23 percent; (3) a program in a business management field, data

programming, or accounting: 17 percent; (4) some field of agriculture, horticulture, or nursery practice: 8 percent; and (5) a public field service, such as law enforcement, fire protection, social work, or nurses aide: 5 percent.

11. The top five choices of fields of study for those females who planned to enroll in "semi–professional or technical training" or "skilled trades training" were: (1) secretarial or office occupation fields: 27 percent; (2) one of the health occupation fields, such as nursing, medical technology, x–ray technology, dental assistants: 22 percent; (3) a program in a business management field, data programming, or accounting: 19 percent; (4) a beauty field such as barber, hairdresser, or cosmotologist: 17 percent; and (5) a public service field, such as law enforcement, fire protection, social work, or nurses aide: 7 percent.

12. The male seniors planning to enroll in a two–year school or college said they intend later to transfer as follows: (1) to a four–year public college or university in Kansas: 52 percent; (2) to a four–year private college or university in Kansas: 3 percent; (3) to a public vocational or technical school in Kansas: 9 percent; and (4) to a private trade or business school in Kansas: 4 percent. About 33 percent do not plan to transfer.

13. The female seniors planning to enroll in a two–year school or college said they intend later to transfer as follows: (1) to a four–year public college or university in Kansas: 44 percent; (2) to a four–year private college or university in Kansas: 3 percent; (3) to a public vocational or technical school in Kansas: 5 percent; and (4) to a private trade or business school in Kansas: 4 percent. About 44 percent do not plan to transfer.

14. The male seniors planning to enroll in a four–year college or university immediately after high school said the courses of study they will follow will be: (1) some liberal arts field: 20 percent; (2) a field like engineering, business administration, or architecture: 43 percent; (3) a field which leads on to graduate study in one of the learned professions: 24 percent; and (4) one of the occupational fields such as pharmacy, journalism, or nursing: 13 percent.

15. The female seniors planning to enroll in a four–year college or university immediately after high school said the courses

of study they will follow will be: (1) some liberal arts field: 37 percent; (2) a field like engineering, business administration, or architecture: 11 percent; (3) a field which leads on to graduate study in one of the learned professions: 19 percent; and (4) one of the occupational fields such as pharmacy, journalism, or nursing: 33 percent.

16. The top 15 choices of the male seniors from a list of 63 fields of study were: (1) business administration: 7 percent; (2) mechanical trades: 7 percent; (3) architecture: 5 percent; (4) mechanical engineering: 4 percent; (5) agriculture technologies: 4 percent; (8) electronic data processing: 3 percent; (9) music: 3 percent; (10) accounting: 3 percent; (11) electrical engineering: 3 percent; (12) secondary school teacher: 3 percent; (13) electronics: 2 percent; (14) premedicine: 2 percent; and (15) fine arts: 2 percent.

17. The top 15 first choices of the female seniors from a list of 63 fields of study were: (1) secretarial studies: 10 percent; (2) elementary school teaching: 9 percent; (3) nursing: 8 percent; (4) cosmotology: 6 percent; (5) home economics: 6 percent; (6) fine arts: 5 percent; (7) social work: 4 percent; (8) secondary school teaching: 4 percent; (9) health technology (medical, dental, laboratory): 4 percent; (10) psychology: 4 percent; (11) business administration: 3 percent; (12) therapy (occupational, physical, speech, music): 3 percent; (13) electronic data processing: 3 percent; (14) music: 3 percent; and (15) accounting: 3 percent.

18. The two main factors which influenced the seniors first choices of fields of study were: (1) a fair knowledge of my interests and abilities: 42 percent for the males and 43 for the females; and (2) subjects studied in high school: 16 percent for the males and 19 for the females.

19. About 25 percent of the seniors rated the educational opportunities offered by their high schools with regard to preparation for their intended pursuits after graduation as "good" or "very good" as contrasted to 25 percent who rated their preparation "inferior" or "very inferior."

20. The male seniors said that the following would be the major sources of financing this posthigh school education: (1) personal savings and/or employment: 55 percent; (2)

parental or family aid: 41 percent; (3) scholarship, grant or other gift: 26 percent; and (4) repayable loan: 19 percent. The major sources for the females were: (1) parental or family aid: 58 percent; (2) personal savings and/or employment: 39 percent; (3) scholarships, grant, or other gift: 26 percent; and (4) repayable loan: 24 percent.

21. About 57 percent of the male seniors and about 45 percent of the female seniors said they were holding a part–time job. The male seniors were earning more money per month in the part–time jobs than were the females.

22. About 20 percent of the male seniors and about 23 percent of the female seniors said that financing further education after high school was a "major concern" for them.

23. The male seniors indicated their degree aspirations as follows: (1) Associate of Arts or equivalent: 14 percent; (2) a Bachelor's degree: 32 percent; (3) a Master's degree: 20 percent; and (4) a Doctor's degree: 14 percent. The percentage for the females for the same degrees were: (1) 16 percent, (2) 36 percent, (3) 17 percent, and (4) 4 percent.

24. The top five factors out of thirteen which the male seniors said had a "major influence" on their intention of pursuing further education or training after high school were: (1) to develop skill for a job: 81 percent; (2) to become more independent: 52 percent; (3) to become more self–reliant: 51 percent; (4) to discern my interests: 47 percent; and (5) to broaden my interests: 44 percent.

25. The top five factors out of thirteen which the female seniors said had a "major influence" on their intention of pursuing further education or training after high school were (1) to develop skill for a job: 82 percent; (2) to become more independent: 65 percent; (3) to meet and understand others: 63 percent; (4) to become more self–reliant: 63 percent; and (5) to broaden my interests: 59 percent.

III. Statements Applicable to Respondents Who Probably Will Not Enroll in Further Education or Training After High School.

1. Of the male students who plan to enter full–time employment after graduation from high school, the top ten first–choice jobs desired were: (1) auto mechanics: 14

percent; (2) farming or ranching: 13 percent; (3) go into business for myself: 4 percent; (4) truck driver: 3 percent; (5) welder: 3 percent; (6) heavy equipment operator: 3 percent; (7) carpenter: 3 percent; (8) unskilled worker (construction): 3 percent; (9) railway worker: 3 percent; and (10) electrician (wireman): 3 percent.

2. Of the female students who plan to enter full-time employment after graduation from high school, the top ten first-choice jobs desired were: (1) housewife: 16 percent; (2) secretary: 15 percent; (3) clerk-typist: 6 percent; (4) general office worker: 6 percent; (5) beautician: 6 percent; (6) receptionist: 6 percent; (7) cashier (retail store): 5 percent; (8) salesperson (retail): 5 percent; (9) telephone operator: 5 percent; and (10) nurse's aide: 4 percent.

3. About 16 percent of the male seniors who planned to enter full-time employment rated their preparation for their intended employment after graduation as "very good" or "superior" as contrasted to 28 percent for the female seniors. The percentages for "very inferior" or "inferior" were 14 percent for the females and 32 percent for the males.

4. Of those male seniors who expected to enter full-time employment, the percentages of males who might be interested in some type of further education and training were: (1) on-the-job training with a company or industry: 48 percent; (2) paid apprenticeship to learn a trade: 24 percent; (3) military service: 6 percent; (4) correspondence study: 3 percent; and (5) adult education classes: 1 percent. About 17 percent said they were not interested in any further education or training.

5. Of those female seniors who expected to enter full-time employment, the percentages of females who might be interested in some type of further education and training were: (1) on-the-job training with a company or industry: 46 percent; (2) paid apprenticeship to learn a trade: 13 percent; (3) adult education classes: 5 percent; (4) correspondence study: 4 percent; and (5) military service: 1 percent. About 30 percent said they were not interested in any further education or training.

6. Of the seniors who desire full-time employment after graduation, 21 percent of the males expect to earn from

$100 to $300 per month as contrasted to 45 percent of the females. In the wage range of $300 to $600 per month, the percentages were: 59 percent for the males and 31 percent for the females.

7. About 65 percent of the male seniors said they were holding a part–time job as contrasted to 46 percent for the female seniors.

8. The six most important reasons given by the male seniors for no desire to enroll in further education or training were: (1) want to work and make money: 21 percent; (2) grades are not good enough: 15 percent; (3) tired of school: 15 percent; (4) not ready for it at this time: 14 percent; (5) work wanted does not require it: 11 percent; and (6) cannot afford it: 10 percent.

9. The six most important reasons given by the female seniors for no desire to enroll in further education or training were: (1) want to get married: 28 percent; (2) want to work and make money: 18 percent; (3) not ready for it at this time: 14 percent; (4) cannot afford it: 10 percent; (5) grades are not good enough: 9 percent; and (6) work wanted does not require it: 8 percent.

IV. Statements Applicable to Respondents Who Planned to Enter Military Service After Graduation.

1. About 12 percent of all the male seniors in the study said they will probably enter the military service and of this 12 percent, 63 percent plan to do so to get training for a career occupation in the military service.

2. Of the 12 percent of all male seniors planning to enter the military service, about 46 percent plan on securing further education and training after getting out of the service.

3. Of the 46 percent planning on obtaining further education and training after their military service is ended, the following are the types of schools or colleges which might interest these male seniors: (1) a public community junior college: 14 percent; (2) a public four–year college or university: 31 percent; (3) a public vocational school: 22 percent; (4) a private two–year or four–year college: 5 percent; and (5) a private business, trade, or vocational school: 27 percent.

4. Of the male seniors planning to enter the military service,

about 29 percent rated the educational opportunities offered by their high schools as "inferior" or "very inferior" as contrasted to 16 percent that rated the opportunities as, "very good" or "superior."

THE RESULTS FOR HIGH SCHOOL GRADUATES

The purposes of the survey of the 1968 graduates were to determine: (1) what recent high school graduates have done, (2) what the graduates are doing now, and (3) what the graduates plan to do in the future relative to educational and work experiences. The major findings of this study are enumerated below:

1. Although there was some variation among the graduates of the various sized schools, the following generalizations hold pertaining to the posthigh school endeavors of Kansas graduates in the fall of 1968 following high school graduation: (1) about 58 percent enrolled in some type of college or university; (2) about 9 percent enrolled in a public or private technical, vocational, or business school; (3) about 22 percent entered full time employment; (4) about 3 percent were unemployed; (5) about 4 percent were housewives; and (6) about 4 percent entered the military service.
2. Of the 1968 Kansas high school graduates who enrolled in some type of college or university: (1) about 47 percent enrolled in one of the six state schools under the Board of Regents; (2) about 4 percent enrolled in Washburn University; (3) about 26 percent enrolled in the Kansas community junior colleges; (4) about 11 percent enrolled in a Kansas two–year or four–year private college; and (5) about 10 percent enrolled in a non–Kansas college or university.
3. Of the 1968 Kansas high school graduates who enrolled in some type of college or university in the fall of 1968: (1) about 67 percent were still in attendance in 1970–71, and about 94 percent of these said they planned to continue into the next year of 1971–72; (2) about 11 percent had finished two years of college but were not in attendance in 1970–71; (3) about 15 percent attended only one full year; and (4) about 6 percent attended less than one year.
4. The five top reasons given for dropping out or not continuing in college or university: (1) tired of school; 21

percent; (2) financial reasons: 15 percent; (3) married: 13 percent; (4) failed: 6 percent; and (5) felt college was not training them for a job: 6 percent.

5. Of the 1968 Kansas high school graduates who enrolled in a technical, vocational, or business school: (1) about 49 percent enrolled in a private business or professional school; (2) about 18 percent enrolled in a Kansas area vocational–technical school, (3) about 7 percent enrolled in the vocational–technical program at Kansas State College of Pittsburg, (4) about 2 percent enrolled in the Kansas Technical Institute at Salina; and (5) about 19 percent enrolled in non Kansas private business or professional schools.

6. Of the 1968 Kansas high school graduates who enrolled in some type of business, trade, or technical school: (1) about 71 percent completed a program for a job, and (2) about 77 percent attended this kind of school for one year or less.

7. Of the 1968 Kansas high school graduates who entered full–time employment in the fall of 1968, the following was typical in terms of the categories used: (1) professional or kindred workers (accountants, engineers, personnel workers): 3 percent; (2) managers, officials, farm owners, farm managers: less than 1 percent; (3) clerical workers (bookkeepers, cashiers, storekeepers): 29 percent; (4) sales workers: 6 percent; (5) craftsman, foremen, and kindred workers (carpenters, electricians, machinists): 5 percent; (6) operatives and kindred workers (apprentices, assemblers, truck drivers, deliverymen, welders): 13 percent; (7) service workers (private household, janitors, guards): 9 percent; and (8) laborers (including farm): 27 percent.

8. The top four reasons for not entering some type of school after graduation from high school or for entering full–time employment were: (1) financial reasons: 25 percent; (2) tired of school: 19 percent; (3) the work did not require additional schooling: 14 percent; and (4) wanted to complete military obligation: 10 percent.

9. Of the 1968 Kansas high school graduates who entered full–time employment after graduation from high school: (1) about 90 were employed in Kansas, and (2) about 8 percent were employed outside of Kansas.

10. Of the 1968 graduates not enrolled in a postHigh school program in the fall of 1970, about 48 percent said they were interested in further schooling as follows: (1) a four-year college: 40 percent; (2) a junior college transfer program: 8 percent; (3) a junior college occupational program: 6 percent; (4) trade or vocational school occupational program: 20 percent; (5) a private business or professional school (barber, secretarial): 14 percent; and (6) on the job apprentice program: 2 percent.

A DESCRIPTION OF STUDENTS ATTENDING VOCATIONAL–TECHNICAL SCHOOLS

INTRODUCTION

The fourteen area vocational–technical schools offer work to three kinds of students. The Kansas Educational Directory (1970–71) lists the following numbers in each category: (1) high school students: 8,774; (2) adult–evening: 12,359; and (3) posthigh school students: 4,630.

During the year 1970–71, questionnaires were constructed by the Master Planning Commission staff in order to gain some insight relative to such areas as: (1) socioeconomic backgrounds, (2) occupational and educational aspirations, (3) self–evaluation of traits and abilities, (4) appraisal of the education and training received, and (5) reasons for seeking additional education and training.

Four questionnaires were administered as follows:

1. *A Study of Kansas High School Students Taking Work in Kansas Area Vocational–Technical Schools.* The number of questionnaires returned was 3,610 (2,235 for males and 1,375 for females). This represents 41 percent of the total number attending these schools.
2. *A Study of Adult–Evening Students Attending Kansas Area Vocational–Technical Schools.* The number of questionnaires returned was 2,662 (1,534 for males and 1,128 for females). This represents 22 percent of the total number attending these schools.
3. *A Study of Kansas Area Vocational–Technical Posthigh School Students.* The number of questionnaires returned was 2,324 (1,731 for males and 593 for females). This represents 50 percent of the total number attending these schools.
4. *A Study of the Students Who Completed A Program in One of the Fourteen Kansas Vocational–Technical Schools in 1968–69.* The schools supplied the names and addresses of 2,478 students. The return was 1,253 questionnaires or 51 percent.

The data obtained is the first of its kind regarding the students attending these schools.

HIGH SCHOOL STUDENTS TAKING WORK IN VOCATIONAL–TECHNICAL SCHOOLS

A number of eleventh and twelfth graders attend vocational–technical schools for a half day. The data revealed the following pertinent information.

1. About 38 percent of the students stated their fathers had some high school work or less whereas about 23 percent had acquired some posthigh school education at various levels including graduate work.
2. About 59 percent of the students stated their average grade in high school was a C+ or less.
3. About 49 percent of the students were "somewhat dissatisfied" or "thoroughly dissatisfied" with their academic achievements in high school whereas an equal percentage were "satisfied" or "thoroughly satisfied" with their academic achievements.
4. About 63 percent stated they were taking work in a vocational–technical school to develop skills for a job.
5. About 27 percent of the students ranked themselves above average in academic ability and about 37 percent ranked themselves above average in mechanical ability.
6. Of the twenty-five types of technicians discussed previously, the top five first choices by the male students were: (a) *automotive*: 31 percent; (b) architectural and construction: 7 percent; (c) agricultural: 5 percent; (d) aeronautical and aerospace: 5 percent; and (e) electronic: 5 percent.
7. Of the twenty-five types of technicians discussed previously, the top five first choices by the female students were: (a) office specialists: 31 percent; (b) health services: 14 percent; (c) electronic data processing: 12 percent; (d) forestry: 5 percent; and (e) police science: 4 percent.

ADULT–EVENING STUDENTS ATTENDING VOCATIONAL–TECHNICAL SCHOOLS

Let us now examine the data relative to the adult–evening students. The following are some of the results:

1. About 70 percent of the students were married and about 52 percent were 30 years or older.

2. About 81 percent had graduated from high school. About two thirds of those who had graduated had graduated from a Kansas high school.
3. About 18 percent of the adult students came from households where the annual income was under $5,000.
4. About 3 percent of the adult students were physically handicapped.
5. About 25 percent of the adult students stated that their fathers (or head of the household) had graduated from high school whereas 45 percent had not graduated from high school. About 30 percent had fathers who had had work beyond the high school at various levels including graduate work.
6. In terms of the U.S. Bureau of Census' classification of occupational groups, about 50 percent had fathers in the five lowest groups.
7. For about 55 percent of the adult students, the main reason for attending a vocational–technical school was "to develop a skill for a job."
8. About 85 percent of the adult students felt the work they were taking in their schools would help them to get a job or a better job.
9. About 51 percent of the adult students attending these schools were fully employed whereas about 13 percent were unemployed and looking for work.
10. Of those fully employed as indicated above, the largest percentage (about 42) were service workers (household, janitors, etc.).
11. About 34 percent of the adult students rated themselves average in academic ability as contrasted to 38 percent in mechanical ability.
12. Of the 77 programs listed, the top five enrolled in by the males were: (a) welding: 13 percent; (b) auto mechanics: 11 percent; (c) air conditioning: 8 percent; (d) electronics: 8 percent; and (e) auto body repair: 5 percent.
13. Of the 77 programs listed, the top five enrolled in by the females were: (a) office education and clerk–typist: 38 percent; (b) practical nursing: 9 percent; (c) vocational homemaking: 8 percent; (d) clothing services: 6 percent;

and (e) data processing: 4 percent.

The scientific and technological revolution is creating career opportunities. The adult students were asked to indicate the first choice among a list of technicians now in much demand and whether or not their vocational–technical school offered training in his or her choice.

Of the twenty–five types of technicians, the top five first choices by the males were: (a) air conditioning and refrigeration: 12 percent; (b) automotive: 12 percent; (c) electronics: 12 percent; (d) aeronautics and aerospace: 8 percent; and (e) electrical: 7 percent. About 65 percent of the adult male students felt that their school offered training in their first choice or type of technician.

Of the twenty–five types of technicians, the top five first choices by the females were: (a) office specialist: 32 percent; (b) health service: 28 percent; (c) electronic data processing: 9 percent; (d) forestry: 3 percent; and (e) police science: 3 percent. About 69 percent of the adult female students felt that their school offered training in their first choice or type of technician.

STUDENTS COMPLETING PROGRAMS IN VOCATIONAL–TECHNICAL SCHOOLS IN 1968–69

Let us examine the data relative to the students who completed one of the several programs in 1968–69. The following are some of the results:

1. About 88 percent graduated from a Kansas high school.
2. About 57 percent attended a high school where the graduating class was under 200 students.
3. About 5 percent had attended a Kansas community junior college before entering a vocational–technical school. Of these, about 46 percent had received an Associate of Arts degree.
4. About 64 percent rated the education and training received as "very good" or "superior" as contrasted to about 5 percent who rated the education and training received as "very inferior" or "inferior."
5. About 64 percent rated their instructors "very good" or "superior" as contrasted to about 5 percent who rated the instructors as "very inferior" or "inferior."
6. About 41 percent rated the counseling and guidance

received with regard to personal problems as "very good" or "superior" as contrasted to about 13 percent who rated the counseling and guidance received as "very inferior" or "inferior."

7. About 42 percent rated the guidance and counseling received with regard to occupational choices or job opportunities as "very good" or "superior" as contrasted to 17 percent who rated the counseling and guidance received as "very inferior" or "inferior."
8. About 79 percent felt that the vocational–technical schools should confer an Associate degree in science or technical training.
9. About 50 percent stated that the job they held was closely related to the program they took in the vocational–technical school.
10. About 62 percent stated that they felt a need for more education and training.
11. Of the 62 percent given above (10) about: (a) 44 percent would attend an advanced technical school, (b) 9 percent would attend a two–year college, and (c) about 22 percent would attend a four–year college or university.
12. Of those working, about 28 percent were earning $75 per week or less, about 36 percent were earning from $75 to $125 per week, and 10 percent were earning over $125 per week.
13. About equal percentages (44 percent) of the students needed to attend one or two semesters or three or four semesters in order to complete the program of studies whereas, about 8 percent needed more than four semesters.
14. About 68 percent stated they were employed part or full–time whereas about 11 percent were unemployed.
15. About 90 percent stated that if they had to start over again, they would have attended a vocational–technical school.
16. The males (285) indicated that they were presently engaged in the following types of work in the order indicated: (a) auto mechanics, (b) farming, (c) mechanics, (d) truck driving, (e) welding, (f) construction, (g) electrician, (h) machinist, (i) sales, (j) auto body repair, (k) drafting, (l)

diesel mechanics, (m) TV repair, (n) printing, and (o) refrigeration repair.

17. The females (297) indicated that they were presently engaged in the following types of work in the order indicated: (a) licensed practical nurse, (b) secretarial, (c) clerical, (d) cosmetology, (e) sales, (f) dental assistant, (g) nurse's aide, (h) cook–food preparation, (i) data processing, and (j) waitress.

POSTHIGH SCHOOL STUDENTS ATTENDING VOCATIONAL–TECHNICAL SCHOOLS

The questionnaire administered to these students was quite extensive in nature and parallels the one give to about 7,700 community junior college students in 1968–69.[4] The use of identical or almost identical items for the posthigh vocational–technical students was done on purpose so that the two groups could be compared. The highpoints of this comparison are given in the next section.

In addition to the comparisons indicated, the posthigh school students were asked to react to the list of twenty–five types of technicians as were the high school students and the adult–evening students.

Of the twenty–five types of technicians, the top five first choices by the males were: (a) automotive: 20 percent; (b) agriculture: 13 percent; (c) electronic: 9 percent; (d) forestry: 6 percent; and (e) mechanical design: 6 percent. About 59 percent of the males felt that their school offered training in their first choice or type of technician.

Of the 15 types of technicians, the top five first choices by the females were: (a) health service: 36 percent; (b) office specialists: 20 percent; (c) electronic data processing: 12 percent; (d) police science: 5 percent; and (e) forestry: 3 percent. About 59 percent of the females felt that their school offered training in their first choice or type of technician.

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4 Kenneth E. Anderson and Robert D. Michal, "Inventory of Certain Characteristics and Opinions of Kansas Community Junior College Students," *Kansas Studies in Education*, 20 (February, 1970) 1–28.

A COMPARISON OF COMMUNITY JUNIOR COLLEGE STUDENTS WITH VOCATIONAL–TECHNICAL SCHOOL STUDENTS ON 131 INVENTORY ITEMS

INTRODUCTION

The two groups of students being compared were 4,725 male and 3,009 female community junior college students and 1,731 male and 593 female vocational–technical students who completed identical questionnaire items about two years apart. More community junior college students in the then existing sixteen community junior colleges were involved than in the fourteen existing area vocational–technical schools. The relative returns were about 90 and 50 percent respectively. Despite the above limitations, it is thought that the comparisons which follow are fairly valid.

COMPARISONS BASED ON RESPONSES HAVING AN UNDERLYING CONTINUUM

Males. There were 33 items which were essentially continuous or had an underlying continuum. Each of the 33 items called for *a* response from the students. The responses ranged from a high one to a low one. Table 4 on page 58 is illustrative of the responses obtained for the 33 items for the 4,725 community junior college male students and the 1,731 male vocational–technical school students. The technique used to determine significant differences in the continuums for each item was analysis of variance.

In comparing the male students, one can make the following statements in terms of one group or the other:

1. The community junior college students were in somewhat larger sized graduating classes than the vocational–technical students.
2. The vocational–technical students were older.
3. The levels of formal education of the fathers and mothers were higher for the community junior college group than for the vocational–technical group.
4. The vocational–technical students were more satisfied with their academic achievement in high school but less so with their preparation for additional schooling beyond high school.
5. The community junior college group rated themselves higher than the vocational–technical group on the following three

items: (1) intellectual curiosity; (2) willingness to stand discomfort in completion of a given task; and (3) questioning the absolute truth of statements from textbooks, newspapers, and magazines or of statements made by persons in position of authority such as teachers, lecturers, and professors. The reverse was true for the following item: willingness to spend time beyond the ordinary schedule in completion of a given task.

6. The community junior college group had a better grade record in the high school than did the vocational–technical group.
7. The total income of the parental family was higher for the community junior college group than it was for the vocational–technical group.
8. The community junior college students rated themselves higher than the vocational–technical students on the following traits: (1) academic ability, (2) athletic ability, (3) leadership ability, (4) originality, (5) political conservatism, (6) political liberalism, (7) public speaking ability, (8) self–confidence (intellectual), (9) self–confidence (social), (10) stubbornness, (11) understanding others, and (12) writing ability.
9. The vocational–technical students rated themselves higher than the community junior college students on the following traits: (1) artistic ability, (2) drive to achieve, (3) mathematical ability, and (4) mechanical ability.

Females. In comparing the 3,009 community junior college female students with the 593 female vocational–technical school students, one can make the following statements in terms of one group or the other:

1. The community junior college students were in somewhat larger sized graduating classes than the vocational–technical students.
2. The vocational–technical students were older.
3. The levels of formal education of the fathers and mothers were higher for the community junior college group than for the vocational–technical group.
4. The community junior college and vocational–technical groups were about equally satisfied with their academic achievement in high school but the community junior college

students rated their preparation in high school higher in terms of readiness for further work beyond the high school.

5. No differences in ratings were apparent between the groups relative to the four traits: (1) intellectual curiosity; (2) willingness to stand discomfort in completion of a given task; (3) willingness to spend time beyond the ordinary schedule in completion of a given task; and (4) questioning the absolute truth of statements from textbooks, newspapers, and magazines or of statements made by persons in position of authority such as teachers, lecturers, and professors.
6. The community junior college group had a better grade record in high school than did the vocational–technical group.
7. The total income of the parental family was about equal for the two groups.
8. The community junior college students rated themselves higher than the vocational–technical students on the following traits: (1) academic ability, (2) originality, (3) political conservatism, (4) political liberalism, (5) public speaking ability, (6) self–confidence (intellectual), and (6) stubbornness.
9. The vocational–technical students rated themselves higher than the community junior college students on the following traits: (1) athletic ability, (2) artistic ability, (3) mathematical ability, and (4) mechanical ability.

Summary. It is obvious from the above that more significant differences existed among the male groups than the female groups and that in terms of the items considered, the community junior college group seemed to be a somewhat different group.

COMPARISONS BASED ON RESPONSES WHICH ARE CATEGORICAL IN NATURE

Males. There were 98 items which were essentially categorical in nature or did not have an underlying continuum. The statements which follow are intended only to describe significant differences in percentages between the two groups: community junior college males (4,725) and vocational–technical school males (1,731). Differences in percentages were considered significant if the chances were less than 1 in 1,000 that they could have occurred by chance alone.

The following statements may be made for the male students in terms of significant differences in percentages:

1. About 22 percent of the vocational–technical students were married as contrasted to 13 percent of the community junior college students.
2. About 67 percent of the vocational–technical students stated that this was their first posthigh school or college enrollment as compared with 37 percent for the community junior college students.
3. About 92 percent of the community junior college students were full time students as contrasted to about 88 percent of the vocational–technical students.
4. About 75 percent of the vocational–technical students applied for admission to only one school or college as contrasted to about 71 percent of the community junior college students.
5. About 83 percent of the community junior college students came to college directly from high school as compared to 73 percent of the vocational–technical students.
6. The difference in percentages with regard to having had an inspirational teacher in high school was significant: 78 percent for the community junior college students and 72 percent for the vocational–technical students. The rank order for the top five inspirational teachers for the two groups were: (1) community junior college students: English and speech, social sciences, mathematics, vocational, and science, and (2) vocational–technical students: vocational, English and speech, mathematics, social sciences, and science.
7. About 91 percent of the parents of the community junior college students wanted their sons to pursue further education as compared to 88 percent for the vocational–technical students.
8. About 70 percent of the community junior college students said they were encouraged by their high school teachers to go to college as contrasted to 57 percent of the vocational–technical students.
9. About 41 percent of the vocational–technical students had no concern about financing their education as compared to about 37 percent for the community junior college students.

10. The following sources produced significant differences in the percentages as the major sources for financing education: (1) personal savings and/or employment: 61 percent for the community junior college students and 57 percent for the vocational–technical students; (2) parental or family aid: 29 percent for the community junior college students and 21 percent for the vocational–technical students; (3) repayable loan: 12 percent for the vocational–technical students and 9 percent for the community junior college students; and (4) scholarship, grant, or other gift: 15 percent for the community junior college students and 11 percent for the vocational–technical students.

11. About 79 percent of the community junior college students indicated that they intend to obtain a Bachelor's degree or higher as contrasted to about 18 percent of the vocational–technical students.

12. About 90 percent of the community junior college students indicated they plan on continuing their education as contrasted to about 49 percent of the vocational–technical students after completion of their work in the present school or college.

13. Of the community junior college students who indicated their intention of continuing their education, about 73 percent plan to do so in a state college or university as contrasted to 28 percent of the vocational–technical students. However, about 49 percent of the vocational–technical students indicated that they plan to go to a public vocational or private business or trade school after completion of their work in the present school.

14. In terms of dealing with accomplishments in high school, greater percentages of the community junior college students indicated participation in activities or in the following five items from twelve possible items: (1) president of an organization: 26 percent for the community junior college students and 15 percent for the vocational–technical students; (2) high rating in a state or regional contest: 28 percent for the community junior college students and 20 percent for the vocational–technical students; (3) varsity letter (sports): 56 percent for the community junior college students and 43 percent for the vocational–technical students; (4) member of scholastic honor society: 7 percent

for the community junior college students and 3 percent for the vocational-technical students; and (5) certificate of merit or letter of commendation in National Merit Program: 4 percent for the community junior college students and 2 percent for the vocational-technical students.

15. The top seven occupations of the male students' fathers were:

Community Junior College			Vocational-Technical		
Rank	Occupation	%	Rank	Occupation	%
1.	Farmer or rancher	18	1.	Farmer or rancher	34
2.	Skilled trades	10	2.	Skilled trades	12
3.	Semi-skilled worker	10	3.	Semi-skilled worker	9
4.	Business executive (management, administrator)	7	4.	Business owner or proprietor	6
5.	Business owner or proprietor	7	5.	Construction trades (including carpentry)	6
6.	Construction trades (including carpentry)	5	6.	Laborer (unskilled)	5
7.	Laborer (unskilled)	5	7.	Business executive (management, administration)	4

16. The top five occupations of the male students' mothers were:

Community Junior College			Vocational-Technical		
Rank	Occupation	%	Rank	Occupation	%
1.	Housewife	54	1.	Housewife	64
2.	Business (clerical)	7	2.	Business (clerical)	6
3.	Nurse	4	3.	Nurse	6
4.	Semi-skilled worker	3	4.	Semi-skilled worker	3
5.	Laborer (unskilled)	2	5.	Laborer (unskilled)	3

17. In terms of the relative importance to the male students of eleven items in their decision to enroll in their school or college, the following produced significant differences in percentages in terms of "major influences" (1) parents or relatives: 55 percent for the community junior college students and 45 percent for the vocational–technical students; (2) high school teacher: 17 percent for the community junior college students and 12 percent for the vocational–technical students; (3) friends attending school or college: 19 percent for the community junior college students and 16 percent for the vocational–technical students; (4) low cost: 55 percent for the community junior college students and 27 percent for the vocational–technical students; (5) reputation of the school or college: 26 percent for the vocational–technical students and 18 percent for the community junior college students; (6) opportunity to live at home: 27 percent for the community junior college students and 10 percent for the vocational–technical students; (7) opportunity to attend school or college close to home: 38 percent for the community junior college students and 22 percent for the vocational–technical students; and (8) former student or representative of the school or college: 13 percent for the vocational–technical students and 9 percent for the community junior college students.

18. The following produced significant differences in percentages as regards the living abode while attending school or college: (1) live at home: 64 percent for the community junior college students and 50 percent for the vocational–technical students; (2) live in college housing: 8 percent for the community junior college students and 2 percent for the vocational–technical students; (3) live in a private home: 19 percent for the vocational–technical students and 13 percent for the community junior college students; and (4) live in an apartment or house by myself or with other students: 37 percent for the vocational–technical students and 23 percent for the community junior college students.

19. About 69 percent of the community junior college students' home were within the college district whereas about 62 percent of the vocational–technical students' homes were within the vocational–technical school district.

20. About 38 percent of the vocational–technical students lived

in Kansas but outside the school district whereas about 28 percent of the community junior college students lived in Kansas but outside the college district.

21. About 93 percent of the vocational–technical students drove or rode in a car to school whereas about 86 percent of the community junior college students did the same. The vocational–technical students (on the average) traveled more miles than did the community junior college students.

22. The students reacted to thirteen items which supposedly could have influenced their decision to further their education beyond high school. In terms of "major influence" the following constituted important differences: (1) improve my ability to think: 52 percent for the community junior college students and 36 percent for the vocational–technical students; (2) develop an interest in cultural expression: 26 percent for the community junior college students and 16 percent for the vocational–technical students; (3) discover my interest: 55 percent for the community junior college students and 46 percent for the vocational–technical students; (4) develop skill for a job: 83 percent for the vocational–technical students and 71 percent for the community junior college students; (5) meet and understand others: 31 percent for the community junior college students and 26 percent for the vocational–technical students; (6) to have social contacts: 24 percent for the community junior college students and 17 percent for the vocational–technical students; (7) to better understand myself as a person: 37 percent for the community junior college students and 29 percent for the vocational–technical students; (8) to learn to live and work with others: 38 percent for the vocational–technical students and 34 percent for the community junior college students; and (9) to prepare for a more difficult school: 57 percent for the community junior college students and 15 percent for the vocational–technical students.

23. A somewhat greater percentage of the vocational–technical students expected to work more hours while attending school than was the case with the community junior college students.

24. In describing the psychological climate or atmosphere of their school or college, the following were important

differences in percentages in terms of "very descriptive": (1) intellectual: 17 percent for the vocational-technical students and 12 percent for the community junior college students; (2) warm: 34 percent for the community junior college students and 27 percent for the vocational-technical students; (3) broadminded: 33 percent for the vocational-technical students and 26 percent for the community junior college students; and (4) highly organized: 29 percent for the vocational-technical students and 19 percent for the community junior college students.

25. In terms of five items with regard to the schools or colleges attended, the following constituted significant differences in percentages: (1) the students are under a great deal of pressure to get good grades: 21 percent for the community junior college students and 16 percent for the vocational-technical students; (2) most of the students are of a very high calibre or are very good students: 77 percent for the vocational-technical students and 21-percent for the community junior college students; (3) there isn't much to do but go to classes and study: 53 percent for the community junior college students and 36 percent for the vocational-technical students; and (4) classes are run in a very informal manner: 65 percent for the vocational-technical students and 47 percent for the community junior college students.

26. Significant differences existed among the students as regards utilizing the services of the guidance program or services of the counselor for five items: (1) problems about grades: 59 percent for the community junior college students and 48 percent for the vocational-technical students; (2) information about colleges: 74 percent for the community junior college students and 51 percent for the vocational-technical students; (3) planning what courses to take: 76 percent for the community junior college students and 55 percent for the vocational-technical students; (4) thinking about what career to choose: 64 percent for the community junior college students and 53 percent for the vocational-technical students; and (5) getting and filling out the right forms and questionnaires for college admission, for scholarships, or for jobs: 63 percent for the community junior college students and 51 percent for the vocational-technical students.

27. A somewhat greater percentage of the community junior college students visited a counselor more times than was true of the vocational–technical students.

28. Significant differences in percentages existed for the following reasons "why most people go to see a counselor:" (1) educational or vocational plans: 66 percent for the community junior college students and 52 percent for the vocational–technical students; (2) problems of a personal nature: 15 percent for the vocational–technical students and 9 percent for the community junior college students; and (3) because they are sent or referred by a teacher, parent, or administrator: 23 percent for the vocational–technical students and 14 percent for the community junior college students.

29. As regards the scores earned by students on scholastic aptitude tests, interest tests, and other kinds of special tests, the following constituted significant differences in percentages: (1) usually been explained to me in private: 43 percent for the community junior college students and 37 percent for the vocational–technical students; (2) usually explained to me along with others in a group: 36 percent for the vocational–technical students and 34 percent for the community junior college students; and (3) have never been explained to me: 27 percent for the vocational–technical students and 22 percent for the community junior college students.

30. As regards standardized tests (ability, interest, personality, achievement, etc.), only the following produced a significant difference in percentages: have left me with a bad feeling about tests in general: 10 percent for the vocational–technical students and 6 percent for the community junior college students.

31. In describing what a counselor is like, the following differences in percentages were significant: (1) a teacher: 24 percent for the community junior college students and 17 percent for the vocational–technical students; and (2) doesn't seem like any of those (teacher, principal or dean, parent, minister, or friend): 25 percent for the vocational–technical students and 17 percent for the community junior college students.

Females. There were 98 items which were essentially categorical in nature or did not have an underlying continuum. The statements which follow are intended only to describe significant differences in percentages between the two groups: community junior college females (3,009) and vocational–technical school females (593). Differences in percentages were considered significant if the chances were less than 1 in 1,000 that they could have occurred by chance alone.

The following statements may be made for the female students in terms of significant differences in percentages:

1. About 28 percent of the vocational–technical students were married as contrasted to 15 percent of the community junior college students.
2. About 71 percent of the vocational–technical students stated that this was their first posthigh school or college enrollment compared with 43 percent for the community junior college students.
3. About 95 percent of the vocational–technical students were full–time students as contrasted to 87 percent of the community junior college students.
4. About 77 percent of the community junior college students applied for admission to only one school or college as contrasted to about 72 percent of the vocational–technical students.
5. About 86 percent of the community junior college students came to college directly from high school as compared to 70 percent of the vocational-technical students.
6. Although the difference in percentages with regard to having had an inspirational teacher in high school was not significant, the rank order for the top five inspirational teachers for the two groups were: (1) community–junior college students: English and speech social sciences, vocational, mathematics, and science; and (2) vocational–technical students; English and speech, vocational, social sciences, science, and mathematics.
7. About 88 percent of the parents of the community junior college students wanted their daughters to pursue further education as contrasted to 83 percent for the vocational–technical students.
8. About 72 percent of the community junior college students said they were encouraged by their high school teachers to go

to college as contrasted to 60 percent for the vocational–technical students.

9. The two groups were about equally concerned about financing their education.

10. The following sources produced significant differences in percentages as the major sources for financing education: (1) parental and family aid: 46 percent for the community junior college students and 37 percent for the vocational–technical students; and (2) scholarship, grant, or other gift: 17 percent for the community junior college students and 12 percent for the vocational–technical students.

11. About 65 percent of the community junior college students indicated that they intend to obtain a Bachelor's degree or higher as contrasted to about 14 percent of the vocational–technical students.

12. About 79 percent of the community junior college students indicated that they plan on continuing their education as contrasted to about 39 percent of the vocational–technical students after completion of their work in the present school or college.

13. Of the community junior college students who indicated their intention of continuing their education, about 58 percent plan to do so in a state college or university as contrasted to about 30 percent of the vocational–technical students. However, about 28 percent of the vocational–technical students indicated that they plan to go to a public vocational or private business or trade school after completion of their work in the present school.

14. In terms of dealing with accomplishments in high school, greater percentages of community junior college students indicated participation in activities or in the following four items from twelve possible items: (1) president of an organization: 23 percent for the community junior college students and 18 percent for the vocational–technical students; (2) high rating in a state or regional contest: 32 percent for the community junior college students and 24 percent for the vocational–technical students; (3) participation in a state or regional speech or debate contest: 13 percent for the community junior college students and 8 percent for the vocational–technical students; and (4) member of a scholastic honor society: 17 percent for the

community junior college students and 7 percent for the vocational–technical students. The reverse was true for "won a varsity letter (sports) where 15 percent of the vocational–technical students marked "yes" as contrasted to 11 percent for the community junior college students.

15. The top seven occupations of the female students' fathers were:

Community Junior College			Vocational–Technical		
Rank	Occupation	%	Rank	Occupation	%
1.	Farmer or rancher	23	1.	Farmer or rancher	27
2.	Skilled trades	11	2.	Skilled trades	12
3.	Semi-skilled workers	9	3.	Semi-skilled workers	11
4.	Laborer (unskilled)	6	4.	Business owner or proprietor	8
5.	Business owner or proprietor	6	5.	Laborer (unskilled)	7
6.	Construction trades (including carpentry)	6	6.	Construction trades (including carpentry)	7
7.	Business executive (management, administration)	6	7.	Business executive (management, administration)	5

16. The top five occupations of the female students' mothers were:

Community Junior College			Vocational–Technical		
Rank	Occupation	%	Rank	Occupation	%
1.	Housewife	59	1.	Housewife	59
2.	Business (clerical)	9	2.	Business (clerical)	8
3.	Nurse	4	3.	Semi-skilled worker	6
4.	Elementary school teacher	4	4.	Nurse	4
5.	Semi-skilled worker	3	5.	Business owner or proprietor	3

17. In terms of the relative importance to the female students of eleven items in their decision to enroll in their school or college, the following produced significant differences in percentages in terms of "major influence:" (1) parents or relatives: 64 percent for the community junior college students and 55 percent for the vocational technical students; (2) high school teacher: 17 percent for the community junior college students and 9 percent for the vocational–technical students; (3) friends attending this school or college: 21 percent for the community junior college students and 16 percent for the vocational–technical students; (4) low cost: 58 percent for the community junior college students and 34 percent for the vocational–technical students; (5) reputation of the school or college: 31 percent for the vocational–technical students and 21 percent for the community junior college students; (6) opportunity to live at home: 32 percent for the community junior college students and 20 percent for the vocational–technical students; (7) opportunity to attend school close to home: 46 percent for the community junior college students and 39 percent for the vocational–technical students; and (8) a former student or representative of the school or college: 21 percent for the vocational–technical students and 10 percent for the community junior college students.

18. The following produced significant differences in percentages as regards the living abode while attending school or college: (1) live at home: 66 percent for the community junior college students and 56 percent for the vocational–technical students; (2) living in college housing: 14 percent for the community junior college students and 1 percent for the vocational–technical students; (3) live in a private home: 15 percent for the vocational–technical students and 9 percent for the community junior college students; and (4) live in an apartment or house by myself or with other students: 36 percent for the vocational–technical students and 14 percent for the community junior college students.

19. About 77 percent of the community junior college students' homes were within the college district whereas about 68 percent of the vocational–technical students' homes were within the vocational–technical school district.

20. About 32 percent of the vocational–technical students lived

in Kansas but outside the school district whereas about 21 percent of the community junior college students lived in Kansas but outside the college district.

21. About 91 percent of the vocational–technical students drove or rode in a car to school whereas 77 percent of the community junior college students did the same. The vocational–technical students (on the average) traveled more miles than did the community junior college students.

22. The students reacted to thirteen items which supposedly could have influenced their decision to further their education beyond high school. In terms of "major influence" the following constituted important differences: (1) improve my ability to think: 51 percent for the community junior college students and 43 percent for the vocational–technical students; (2) develop an interest in cultural expression: 29 percent for the community junior college students and 21 percent for the vocational–technical students; (3) develop skill for a job: 91 percent for the vocational–technical students and 77 percent for the community junior college students; (4) to meet and understand others: 51 percent for the vocational–technical students and 46 percent for the community junior college students; (5) to have social contacts: 32 percent for the community junior college students and 25 percent for the vocational–technical students; (6) to become more self–reliant: 64 percent for the vocational–technical students and 55 percent for the community junior college students; (7) to live and work with others: 58 percent for the vocational–technical students and 47 percent for the community junior college students; (8) to become more independent: 66 percent for the vocational–technical students and 56 percent for the community junior college students; (9) to prepare for a more difficult school: 50 percent for the community junior college students and 14 percent for the vocational–technical students; and (10) didn't have anything else to do: 5 percent for the community junior college students and 4 percent for the vocational–technical students.

23. A somewhat greater percentage of community junior college students expected to work more hours while attending school than was the case with the vocational–technical students.

24. In describing the psychological climate or atmosphere of their

school or college, the following were important differences in percentages in terms of "very descriptive:" (1) intellectual: 27 percent for the vocational–technical students and 15 percent for the community junior college students; (2) practical or realistic: 50 percent for the vocational–technical students and 44 percent for the community junior college students; and (3) highly organized: 37 percent for the vocational–technical students and 17 percent for the community junior college students.

25. In terms of five items with regard to the schools or colleges attended, the following constituted significant differences in percentages: (1) the students are under a great deal of pressure to get good grades: 32 percent for the vocational–technical students and 15 percent for the community junior college students; (2) most of the students are of a very high calibre or are very good students: 80 percent for the vocational–technical students and 20 percent for the community junior college students; and (3) classes are usually run in a very informal manner: 68 percent for the vocational–technical students and 58 percent for the community junior college students.

26. Significant differences existed among the students as regards utilizing the services of the guidance program or services of the counselor for five items: (1) information about colleges: 69 percent for the community junior college students and 43 percent for the vocational–technical students; (2) planning what courses to take: 70 percent for the community junior college students and 45 percent for the vocational–technical students; (3) thinking about what career to choose: 56 percent for the community junior college students and 45 percent for the vocational–technical students; (4) getting and filling out the right forms and questionnaires needed for application for college admissions, for scholarships, or for jobs: 60 percent for the community junior college students and 40 percent for the vocational–technical students; and (5) information about draft and about opportunities in the armed services: 24 percent for the vocational–technical students and 20 percent for the community junior college students.

27. A somewhat greater percentage of the community junior college students visited a counselor more times than was true

of the vocational–technical students.

28. Significant differences in percentages existed for the following reasons "why most people go to see a counselor:" (1) to talk about educational plans or problems: 64 percent for the community junior college students and 54 percent for the vocational–technical students; (2) to talk about problems of a personal nature: 17 percent for the vocational–technical students and 8 percent for the community junior college students; and (3) because they are sent or referred by a teacher, parent, or administrator: 20 percent for the vocational–technical students and 15 percent for the community junior college students.

29. As regards the scores earned by students on scholastic aptitude tests, interest tests, and other special kinds of tests, none of the differences in percentages were significant.

30. As regards standardized tests (ability, interest, personality, achievement, etc.), the only significant difference in percentages was the following: "have helped me to better understand myself or what I want to do." The percentage was 42 percent for the vocational–technical students and 36 percent for the community junior college students.

31. In describing what a counselor is most like the following differences in percentages were significant: (1) a teacher: 30 percent for the community junior college students and 22 percent for the vocational–technical students; and (2) a friend: 49 percent for the vocational–technical students and 41 percent for the community junior college students.

Summary. It is difficult to generalize in terms of the items in this section. However, in terms of the positiveness or "goodness" of the items, one might say that the community junior college students had more going for them as a group than was the case for the vocational–technical students. Too, in the same context, the differences were not as extensive among the two groups of female students.

COMMUNITY JUNIOR COLLEGE GRADUATES

INTRODUCTION

In the spring of 1968, Kansas high school seniors were given the opportunity to participate in the American College Testing program. Many of the seniors indicated at that time that their scores were to be sent to one or more of the then existing sixteen Kansas community junior colleges. A list of these students was obtained for each of the colleges and these lists were sent to each college in the fall of 1970 asking them to indicate the students who had received the Associate of Arts degree in June of 1970. During January of 1971, a questionnaire entitled *Inquiry to Graduates of Kansas Community Junior Colleges* was sent to 1,662 graduates who completed a previous questionnaire during the 1968-69 school year.[5] A total of 951 completed questionnaires were mailed back yielding a 57 percent return. The 951 students cannot be considered as truly representative of the entire group of 1,662 students. Therefore the statements that follow pertain only to those students who returned the questionnaires.

RESULTS

The following statements are intended to highlight the responses of the graduates:

1. About 78 percent of the graduates indicated they were attending a college or university and about 18 percent said they were employed either part-time or full-time.
2. Of the 78 percent attending a college or university, about 90 percent said they were enrolled at a Kansas institution.
3. In rating the education received in the community junior colleges in regard to preparation for the additional college work, the results were: (1) good: 40 percent; (2) very good: 40 percent; and (3) superior: 11 percent. The terms "very inferior" and "inferior" were used in only 7 percent of the cases.
4. The students rated the community junior college faculty members as follows: (1) good: 42 percent; (2) very good: 43 percent; and (3) superior: 9 percent. The terms "very inferior" and "inferior" was used in only 6 percent of the cases.

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5. *Ibid.*

5. About 69 percent of the graduates now in four–year colleges felt their community junior college instructors demanded enough of them academically.

6. Upon graduation from the four–year colleges or universities, about 21 percent said they would go on for graduate work.

7. About 85 percent of the graduates said they would attend a community junior college if they had a chance to start over again.

8. About 24 percent of the graduates experienced transfer problems (loss of credits or grades) upon entering the senior colleges. However, only 15 percent felt the problem was "very serious."

9. Of the graduates who were employed or unemployed (not in college), about 62 percent felt the need for more education and training. About 46 percent of these said they would go to a four–year college or university.

10. About 88 percent of the graduates who were employed or unemployed (not in college), indicated they would attend a community junior college if they had a chance to start over again.

11. About 40 percent of the graduates employed or unemployed (not in college), said that the education and training received in the community junior college helped them to obtain their first job after graduation.

12. About 19 percent of those working or unemployed (not in college), said they considered attending a vocational–technical school rather than a community junior college.

13. The following were the results with regard to earnings per week by the graduates employed (not in college): (1) under $100: 63 percent; (2) $100 to $199: 25 percent; and (3) $200 or over: 3 percent.

14. Of the graduates attending four–year colleges and universities in Kansas: (1) about 90 percent were in attendance at the six schools under the Board of Regents; (2) about 2 percent were at Washburn University; and (3) about 5 percent were in attendance at the private colleges in Kansas. The rank order from most to least for those in attendance at the six schools under the Board of Regents was: (1) Kansas State University; (2) Kansas State College of

Pittsburg, (3) Kansas State Teachers College (Emporia); (4) Fort Hays Kansas State College; (5) Wichita State University; and (6) University of Kansas.

15. The 21 percent who intend to go on to graduate work after obtaining a Bachelor's degree at a Kansas institution replied as follows: (1) University of Kansas: 22 percent; (2) Kansas State University: 16 percent; (3) Kansas State College of Pittsburg: 16 percent; (4) Wichita State University: 10 percent; (5) Kansas State Teachers College (Emporia): 10 percent; (6) Fort Hays Kansas State College: 8 percent; and (7) Washburn University: 5 percent.

16. The top five major areas of study in rank order pursued by community junior college graduates in Kansas four year institutions were: (1) education; (2) business and related areas; (3) social sciences; (4) engineering and related areas; and (5) English and related areas.

17. The top four types of work in rank order engaged in by the employed community junior college graduates (not in college) were: (1) secretarial or related work; (2) sales; (3) labor (production work); and (4) clerking.

SENIORS AND GRADUATES OF KANSAS FOUR–YEAR INDEPENDENT COLLEGES

INTRODUCTION

Questionnaires were completed by 1,412 seniors (729 males and 683 females) in January of 1971. Another inquiry was mailed to 1,538 (781 males and 757 females) 1967 graduates and 879 (417 males and 462 females) were returned constituting about 57 percent return.

The statements which follow are an attempt to highlight the responses of the seniors and graduates to each of the inquiries.

SENIORS

1. About 43 percent of the seniors graduated from Kansas high schools.
2. About 70 percent came to the Kansas colleges directly from high school, about 11 percent from a junior college, and about 15 percent from other four–year colleges.
3. About 21 percent of the seniors stated their fathers had one or more college degrees while another 20 percent of the fathers had had some college work.
4. About 20 percent of the seniors stated their mothers had one or more college degrees while another 23 percent of the mothers had had some college work.
5. About 34 percent of the seniors estimated the total annual income (before taxes) of their parental families to be $10,000 or less while 48 percent estimated the total annual income (before taxes) of their parental families to be $10,000 or over.
6. As far as working while attending college, the following were typical of the seniors: (1) about 11 percent worked 1 to 5 hours per week, (2) about 42 percent worked 6 to 20 hours per week, and (3) about 16 percent worked more than 20 hours per week.
7. About 33 percent rated the counseling received with regard to personal problems as "very good" or "superior."
8. About 39 percent rated the counseling received with regard to academic problems as "very good" or "superior."
9. About 50 percent of the seniors planned on obtaining a master's degree and about 13 percent planned on obtaining a

Doctor of Philosophy or Doctor of Education degree.

10. The seniors rated the items as "very good" or "superior" as follows: (1) food service provided by the college: 25 percent; (2) supervised living quarters: 44 percent; and (3) health services: 16 percent.

11. In rating the town (in which the college is located) and its people as to friendliness and consideration of students' needs, about: (1) 32 percent rated the towns below average; (2) 34 percent rated the towns about average.

12. About 83 percent of the seniors felt the colleges had provided them with sufficient opportunities for cultural growth and development.

13. About 66 percent of the seniors felt that attending college in a Christian environment had had a good effect on their lives.

14. About 71 percent of the seniors planned on doing graduate work.

15. In rating the major area of study pursued, about 45 percent of the seniors rated the number of courses on depth of study available as "very good" or "superior."

16. In rating the library holdings for study in their major areas, about 18 percent said "very adequate" and 27 percent said "very inadequate."

17. In rating the quality of the work in their major area of study, about 47 percent used the terms "very good" or "superior."

18. About 88 percent of the seniors said their parents wanted them to go to college.

19. About 92 percent of the seniors felt the State of Kansas should provide state aid to support the colleges.

20. About 71 percent of the Kansas seniors felt that the State of Kansas should have provided them with a scholarship grant.

21. In rating themselves on twelve characteristics, the top three items in terms of "above average" or in the "highest ten percent" were: (1) understanding others: 75 percent; (2) drive to achieve: 65 percent; and (3) self confidence (intellectual): 55 percent. The low three items were: (1) artistic ability: 21 percent; (2) mechanical ability: 26 percent; and (3) mathematical ability: 27 percent.

22. In describing the psychological climate or atmosphere of the colleges, the seniors rated eight items "very descriptive" as

follows: (1) warm: 51 percent; (2) practical or realistic: 26 percent; (3) broad minded: 22 percent; (4) victorian (narrow in opinion or expression particularly regarding conduct): 21 percent; (5) intellectual: 19 percent; (6) social: 19 percent; (7) highly organized: 17 percent; and (8) snobbish: 6 percent.

23. In deciding to go to college, the following were the top three factors out of thirteen, in terms of "major influence:" (1) to develop skill for a job: 62 percent; (2) to become more independent: 58 percent; and (3) to become more self reliant: 56 percent. The three lowest factors in terms of "major influence" were: (1) nothing else to do: 7 percent; (2) to prepare for a more difficult school: 15 percent; and (3) to have social contacts: 33 percent.

24. The following were the top five factors out of twenty six which had a "strong positive influence" in the seniors' decision to attend their college: (1) membership in a small student body: 54 percent; (2) close student faculty relationship: 54 percent; (3) opportunity to live away from home: 35 percent; (4) application for admission was accepted: 34 percent; and (5) more opportunity to participate in activities than in a larger school: 31 percent.

25. The following were the top five factors out of twenty six which acted as a "detriment" in the seniors' decision to attend their college: (1) cost: 25 percent; (2) location in a small midwestern community: 12 percent; (3) within commuting distance: 11 percent; (4) Christian atmosphere: 7 percent; and (5) social life: 7 percent.

26. The top five factors out of fourteen which had a "strong positive influence" in selection of a major area of study by the seniors were: (1) felt they had the qualities to be successful in the field: 65 percent; (2) previous work experience in the field: 45 percent; (3) persons working in the field: 44 percent; (4) previous success in basic courses: 36 percent; and (5) quality of the faculty: 30 percent.

27. The top four probable career occupations of the men were: (1) business executive: 16 percent; (2) secondary school teacher: 16 percent; (3) college teacher: 9 percent; and (4) lawyer: 5 percent.

28. The top four probable career occupations of women were: (1) elementary school teacher: 31 percent; (2) secondary

school teacher: 19 percent; (3) social worker: 8 percent; and (4) college teacher: 3 percent.

29. The following were termed a "major source" of revenue for attending college in terms of the percentages shown: (1) parental family aid: 51 percent; (2) summer work: 48 percent; (3) repayable loan: 37 percent; (4) scholarship, grant, or gift: 27 percent; (5) work during the school year: 27 percent; (6) personal savings: 26 percent; (7) spouse's earnings: 8 percent; (8) veteran's administration: 5 percent; and (9) tuition exemption: 3 percent.

30. In rating the strength of the preparation of the education received at their colleges, the seniors rated nine factors as "strong" in this order: (1) total development as an individual: 50 percent; (2) motivation and ability to work independently: 41 percent; (3) an increased awareness of and appreciation for the aesthetic aspects of life: 41 percent; (4) a broad experience in the humanities: 36 percent; (5) adequate introduction to the social science: 36 percent; (6) competence in the arts of communication: 23 percent; (7) adequate introduction to natural science: 23 percent; (8) training in laboratory technique: 14 percent; and (9) ability to understand and use mathematical concepts: 14 percent.

GRADUATES

1. About 54 percent of the graduates graduated from Kansas High Schools.
2. About 5 percent of the graduates had attended a Kansas community junior college before entering these colleges.
3. About 21 percent of the graduates stated their fathers had one or more college degrees while another 17 percent of the fathers had had some college work.
4. About 15 percent of the graduates stated their mothers had one or more college degrees while another 22 percent of the mothers had had some college work.
5. About 45 percent of the graduates estimated their individual or family income (before taxes) to be $10,000 or less while another 50 percent estimated the income to be $10,000 or over.
6. As regards grade averages earned in college, the graduates responded as follows: (1) about 12 percent had earned an A

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average, (2) about 63 percent had earned a B average, and (3) about 25 percent had earned a C average.

7. About 86 percent of the graduates felt that the colleges and their programs had provided them with sufficient opportunities for cultural growth and development.

8. About 82 percent of the graduates felt that attendance at a college in a Christian environment had had a good effect on their outlook on life.

9. About 85 percent felt that they had had an inspirational college teacher who was a recognized teacher of excellence in his or her field.

10. The top five major areas of study for the men graduates were: (1) social sciences: 26 percent; (2) business: 22 percent; (3) sciences: 16 percent; (4) mathematics: 6 percent; and (5) elementary education: 5 percent.

11. The top five major areas of study for the female graduates were: (1) elementary education: 33 percent; (2) English, (including speech): 12 percent; (3) social sciences: 11 percent; (4) home economics: 6 percent; and (5) music (including music education): 5 percent.

12. In rating the major area of study pursued, about 38 percent of the graduates rated the number of courses or depth of study available as "very good" or "superior."

13. In rating the quality of work in their major area of study, about 40 percent used the terms "very good" or "superior."

14. In rating the library holdings for study in their major area of study, about 16 percent said "very adequate" and about 22 percent said "very inadequate."

15. About 82 percent of the graduates felt the State of Kansas should provide state aid to support the colleges.

16. About 35 percent of the graduates (Kansas) felt the State of Kansas should have provided them with a scholarship grant.

17. About 60 percent of the graduates indicated they continued or were continuing their schooling in another college or university.

18. Of the 60 percent who continued their education, about 19 percent attended a private college or university whereas 81 percent attended a public college or university.

19. Of the 60 percent who continued their education, about 87

percent did so at the graduate level.

20. Of those who continued their work at the graduate level, about 49 percent rated their undergraduate preparation for graduate work as "very good" or "superior."

21. Since receiving their undergraduate degrees, about 18 percent had earned one or more graduate degrees.

22. In rating their college education or preparation in terms of their present occupations, 91 percent used the terms "very adequate" or "adequate."

23. The top five occupations held by the male graduates were: (1) secondary school teacher: 16 percent; (2) student: 10 percent; (3) business executive: 8 percent; (4) elementary school teacher: 7 percent; and (5) military service: 6 percent.

24. The top five occupations held by the female graduates were: (1) elementary school teacher: 31 percent; (2) housewife: 22 percent; (3) secondary school teacher: 17 percent; (4) social worker: 5 percent; and (5) nurse: 4 percent.

25. In rating themselves on twelve characteristics, the top three items in terms of "above average" or in the "highest ten percent" were: (1) drive to achieve: 72 percent; (2) understanding others: 71 percent; and (3) academic ability: 58 percent. The low three items were: (1) artistic ability: 24 percent; (2) mathematic ability: 31 percent; and (3) mechanical ability: 31 percent.

26. In rating the strength of the preparation of the education received at their colleges, the graduates rated nine factors as "strong" in this order: (1) an increased awareness of and appreciation for the aesthetic aspects of life: 48 percent; (2) total development as an individual: 44 percent; (3) a broad experience in the humanities: 40 percent; (4) motivation and ability to work independently: 39 percent; (5) adequate introduction to natural science: 28 percent; (6) adequate introduction to social science: 27 percent; (7) competence in the art of communication: 21 percent; (8) ability to understand and use mathematical concepts: 15 percent; and (9) training in laboratory technique: 15 percent.

A COMPARISON OF FOUR GROUPS OF KANSAS COMMUNITY JUNIOR COLLEGE STUDENTS

INTRODUCTION

During the school year 1968–69, all of the students in the sixteen community junior colleges were asked to complete an inquiry consisting of 158 items covering such areas as:

1. Socioeconomic backgrounds.
2. Occupational and educational aspirations.
3. Appraisal of the guidance and counseling received.
4. Self–evaluation of traits and abilities.
5. Evaluation of the college climate and atmosphere.
6. Reasons for and factors influencing college attendance.

The results of this study appeared in an issue of *Kansas Studies in Education*[6] and form a basis for the present study.

In October, 1970, the sixteen community junior colleges were furnished a list of names of students who participated in the American College Testing program as high school seniors in the spring of 1968 and who at that time indicated they intended to enroll at one of the colleges. The colleges were asked to classify the students into the categories[7] listed below:

1. Attended a Kansas community junior college, did not graduate, and did not pursue additional education at a Kansas four–year institution (Males: 882; Females: 658).
2. Completed a program (graduated) at a Kansas community junior college but did not pursue additional education at a Kansas four–year institution (Males: 152; Females: 176).
3. Attended a Kansas community junior college, did not graduate, but did pursue additional education at a Kansas four–year institution (Males: 318; Females: 176).
4. Attended a Kansas community junior college, did graduate, and did pursue additional education at a Kansas four–year institution (Males: 512; Females: 310).

The four groups were compared on twenty–three of the 158 items by the technique of analysis of variance along with a suitable test for

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6. *Ibid.*
7. The numbers in parentheses after each category are the numbers of males and females in that category as marked by the colleges.

"posterior comparisons." Each of the twenty–three items called for a response from the students. The responses ranged from a high one to a low one. Table 4 is illustrative of the responses obtained for the twenty–three items from the 3,184 students.

The twenty–three items used in these comparisons were:

1. How old will you be on December 31 of this year?
2. How many students were in your high school graduating class?
3. What is the highest level of formal education attained by your father?
4. What is highest level of formal education attained by your mother?
5. What was your average grade in high school?
6. How would you rate the educational opportunities offered by your high school in regard to preparation for college work?
7. How satisfied were you with your academic achievement in high school?
8. How would you rate yourself in terms of intelectual curiousity? (Do you frequently ask yourself why a particular thing is so or how do I know it is true?)
9. How would you rate yourself in terms of willingness to stand discomfort (a cold, illness, etc.) in completion of a given task?
10. How would you rate yourself in terms of willingness to spend time, *beyond the ordinary schedule*, in completion of a given task?
11. How would you rate yourself in terms of questioning the absolute truth of statements from textbooks, newspapers, and magazines or of statements made by persons in position of authority such as teachers, lecturers, and professors?
12. What is your best estimate of the total income of your parental family (not your own family if you are married)? Consider annual income from all sources before taxes.
13. How would you rate yourself on academic ability?
14. How would you rate yourself on athletic ability?
15. How would you rate yourself on artistic ability?
16. How would you rate yourself on drive to achieve?

TABLE 4
RESPONSES OF FEMALES TO THE
FOLLOWING ITEM: WHAT WAS YOUR AVERAGE
GRADE IN HIGH SCHOOL?

Response	Groups*							
	1		2		3		4	
	N	%	N	%	N	%	N	%
A or A+	17	3	5	3	3	2	24	9
A–	39	6	16	9	20	11	33	12
B+	82	12	47	27	35	20	64	23
B	175	27	55	31	53	30	87	31
B–	100	15	23	13	26	15	37	13
C+	119	18	20	11	22	12	22	8
C	118	18	10	6	17	10	12	4
D	5	1	0	0	0	0	1	0
Total	655	100	176	100	176	100	280	100

*Group 1: Attended, did not graduate, and did not continue.
Group 2: Graduated and did not continue.
Group 3: Attended, did not graduate, but transferred.
Group 4: Graduated and transferred.

17. How would you rate yourself on leadership ability?
18. How would you rate yourself on mathematical ability?
19. How would you rate yourself on mechanical ability?
20. How would you rate yourself on originality?
21. How would you rate yourself on public speaking ability?
22. How would you rate yourself on self confidence (intellectual)?
23. How would you rate yourself on writing ability?

THE RESULTS OF THE ANALYSIS

The following statements are intended to highlight the results of the analysis. The statements are based on significant differences among the means of the four groups.

Males. One may make the following statements with regard to the four male groups:

1. The male students in Group 2 were older than the male students in Groups 3 and 4.
2. The male students in Groups 1 and 3 had been members of larger sized high school graduating classes than was true for the male students in Groups 2 and 4.
3. The fathers of the male students in Groups 3 and 4 had achieved a higher level of formal education than was true of the fathers of the male students in Groups 1 and 2.
4. The mothers of the male students in Groups 3 and 4 had achieved a higher level of formal education than was true of the mothers of the male students in Groups 1 and 2.
5. The male students in Group 4 had earned a higher high school grade average than was true of the male students in Groups 1, 2, and 3; and the male students in Groups 2 and 3 had earned a higher high school grade average than was true of male students in Group 1.
6. The male students in Group 3 rated the "educational opportunities offered by their high schools in regard to

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Group 1: Attended, did not graduate, and did not continue.
Group 2: Graduated and did not continue.
Group 3: Attended, did not graduate, but transferred.
Group 4: Graduated and transferred.

preparation for college work" higher than did the male students in Group 4.

7. The male students in Group 2 were more satisfied with their academic achievement in high school than were the male students in Groups 1 and 3. Also, Group 4 rated their satisfaction higher than did the students in Group 1.
8. The male students in Groups 2 and 3 rated themselves higher than did the male students in Group 4 relative to "intellectual curiosity." The same was true for Group 3 relative to the students in Group 1.
9. The male students in Groups 2 and 3 rated themselves higher than did the male students in Group 4 in terms of "willingness to stand physical discomfort in completion of a given task."
10. The male students in Groups 1, 2, and 3 rated themselves higher than did the male students in Group 4 in terms of "willingness to spend time beyond the ordinary schedule in completion of a given task."
11. The male students in Groups 1, 2, and 3 rated themselves higher than did the male students in Group 4 in terms of "questioning the truth from various sources."
12. The male students in Groups 1, 2, and 3 estimated the total income of their parental families to be higher than those of the male students in Group 4. The same was true of the male students in Group 3 when contrasted to the male students in Group 2.
13. The male students in Group 4 rated themselves higher than did the male students in Groups 1, 2, and 3 relative to "academic ability." The same was true of the male students in Groups 2 and 3 when contrasted to the male students in Group 1.
14. The male students in Group 4 rated themselves higher than did the male students in Groups 1, 2, and 3 relative to "athletic ability." The same was true of the male students in

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Group 1: Attended, did not graduate, and did not continue.
Group 2: Graduated and did not continue.
Group 3: Attended, did not graduate, but transferred.
Group 4: Graduated and transferred.

Groups 2 and 3 when contrasted to the male students in Group 1.

15. The male students in Group 4 rated themselves higher than did the male students in Groups 1, 2, and 3 relative to "artistic ability."
16. The male students in Group 3 rated themselves higher than did the male students in Groups 1 and 4 relative to "drive to achieve."
17. The male students in Group 4 rated themselves higher than did the male students in Groups 1, 2, and 3 relative to "leadership ability." The same was true of male students in Group 3 when contrasted to the male students in Groups 1 and 2.
18. The male students in Group 4 rated themselves higher than did the male students in Groups 1, 2, and 3 relative to "mathematical ability."
19. The male students in Groups 2 and 4 rated themselves higher than did the male students in Group 3 relative to "mechanical ability."
20. The male students in Group 4 rated themselves higher than did the students in Groups 1, 2, and 3 relative to "originality."
21. The male students in Groups 3 and 4 rated themselves higher than did the male students in Groups 1 and 2 relative to "public speaking ability."
22. The male students in Group 4 rated themselves higher than did the male students in Groups 1, 2, and 3 relative to "self confidence (intellectual)." The same was true for male students in Group 3 when contrasted to the male students in Group 1.
23. The male students in Group 4 rated themselves higher than did the male students in Groups 1, 2, and 3 relative to "writing ability."

Group 1: Attended, did not graduate, and did not continue.
Group 2: Graduated and did not continue.
Group 3: Attended, did not graduate, but transferred.
Group 4: Graduated and transferred.

Females. One may make the following statements with regard to the four female groups:

1. The female students in Group 1 had been members of larger sized high school graduating classes than was true for the female students in Group 2.
2. The fathers of the female students in Groups 3 and 4 had achieved a higher level of formal education than the fathers of the female students in Groups 1 and 2.
3. The mothers of the female students in Groups 3 and 4 had achieved a higher level of formal education than the mothers of the female students in Groups 1 and 2.
4. The female students in Group 4 had earned a higher high school grade average than was true of the female students in Groups 1 and 3. The same was true for the female students in Groups 2 and 3 when contrasted to the female students in Group 1.
5. The female students in Groups 2 and 3 rated the "educational opportunities offered by their high schools in regard to preparation for college work" higher than did the female students in Group 4.
6. The female students in Groups 1, 2, and 3 rated themselves higher than did the female students in Group 4 relative to "intellectual curiosity."
7. The female students in Groups 1, 2, and 3 rated themselves higher than did the female students in Group 4 relative to "willingness to stand physical discomfort in completion of a given task."
8. The female students in Groups 1, 2, and 3 rated themselves higher than did the female students in Group 4 in terms of "willingness to spend time beyond the ordinary schedule in completion of a given task."
9. The female students in Groups 1 and 2 rated themselves higher than did the female students in Groups 3 and 4 in terms of "questioning the truth from various sources."

Group 1: Attended, did not graduate, and did not continue.
Group 2: Graduated and did not continue.
Group 3: Attended, did not graduate, but transferred.
Group 4: Graduated and transferred.

10. The female students in Group 3 estimated the total income of their parental families to be higher than did the female students in Groups 2 and 4. The same was true of those female students in Group 2, when contrasted to the female students in Group 4.

11. The female students in Group 4 rated themselves higher than did the female students in Groups 1, 2, and 3 relative to "academic ability." The same was true of the female students in Groups 2 and 3 when contrasted to the female students in Group 1.

12. The female students in Group 4 rated themselves higher than did the female students in Groups 1, 2, and 3 relative to "athletic ability." The same was true of the female students in Group 3 when contrasted to the female students in Group 1.

13. The female students in Group 4 rated themselves higher than did the female students in Groups 1, 2, and 3 relative to "artistic ability."

14. The female students in Group 4 rated themselves higher than did the female students in Groups 1, 2, and 3 relative to "leadership ability." The same was true for the female students in Group 3 when contrasted to the female students in Group 1.

15. The female students in Group 4 rated themselves higher than did the female students in Groups 1, 2, and 3 relative to "mathematical ability."

16. The female students in Group 4 rated themselves higher than did the female students in Groups 1, 2, and 3 relative to "mechanical ability."

17. The female students in Group 4 rated themselves higher than did the female students in Groups 1, 2, and 3 relative to "originality."

18. The female students in Group 4 rated themselves higher than did the female students in Groups 1, 2, and 3 relative to "public speaking ability."

Group 1: Attended, did not graduate, and did not continue.
Group 2: Graduated and did not continue.
Group 3: Attended, did not graduate, but transferred.
Group 4: Graduated and transferred.

19. The female students in Group 4 rated themselves higher than did the students in Groups 1, 2, and 3 relative to "self confidence (intellectual)." This was true of the female students in Group 3 when contrasted to the female students in Group 1.

20. The female students in Group 4 rated themselves higher than did the students in Groups 1, 2, and 3 relative to "writing ability."

Summary

It is apparent from Table 4 and the above discourse that significant differences among the four male groups were somewhat more frequent than was true for the four female groups on the items examined.

It is also apparent that the males and females in Groups 3 and 4 were different from and had more going for them in terms of the items examined than was the case for the males and females in Groups 1 and 2.

In addition, the males and females in Group 4 rated themselves significantly higher on more of the ability items (academic, athletic, artistic, leadership, mathematical, originality, public speaking, self confidence (intellectual), and writing ability) than did the males and females in Groups 1, 2, and 3. One might conclude in terms of these findings that the students in Group 4 had a higher potential for success in future college work than the students in the other three groups. This statement is supported by the results in the next section relative to the mean scores obtained by the four groups on the tests given in the American College Testing program.

Group 1: Attended, did not graduate, and did not continue.
Group 2: Graduated and did not continue.
Group 3: Attended, did not graduate, but transferred.
Group 4: Graduated and transferred.

AMERICAN COLLEGE TESTING PROGRAM

Most of the students in this study participated in the American College Testing program as Kansas high school seniors in the spring of 1968. The academic tests cover four subject areas: (1) English usage, (2) mathematical usage, (3) social studies reading, and (4) natural science reading. There is a fifth test score called the composite score which is an average of the four tests. All the scores used were standard scores.

Table 5 shows the results of the analysis of the four sets of test scores and the composite score. In order to read this table, let us examine the "significant difference among means" column for Mathematics Usage. It reads: 4–1*, 4–2*, 4–3*, 3–1*, and 2–1*. The five sets of numbers indicate that the students in Group 4 scored significantly higher on Mathematics Usage test than did the students in Groups 1, 2, and 3. Also that the students in Groups 2 and 3 scored significantly higher on this test than did the students in Group 1. The single * indicates that the differences between the means of the two groups was significant at the 1 percent level. The ** indicates significance at the 5 percent level.

It must be pointed out that although significant differences among the means of the four groups were established on the five tests, considerable overlap was present in the five distributions for the four groups. For example, the standard deviations for the four groups on the Composite Score were: (1) Group 1: 5.79, (2) Group 2: 5.77, (3) Group 3: 5.97, and (4) Group 4: 5.93.

Summary

It is apparent from the data presented that the students in Group 4 had a higher potential for success in future college work than the students in the other three groups. Too, that the students in the other groups could be ranked in this order in terms of potential for future college work: (1) Group 3, (2) Group 2, and (3) Group 1.

Group 1: Attended, did not graduate, and did not continue.
Group 2: Graduated and did not continue.
Group 3: Attended, did not graduate, but transferred.
Group 4: Graduated and transferred.

TABLE 5
COMPARISON OF THE FOUR GROUPS ON ACT SCORES

Test	Group Means No.				Order of Means — High to Low	Significant Differences Among Means	
	1	2	3	4			
English Usage	16.22	18.03	17.51	18.14	4-2-3-1	4-1* 2-1* 3-1*	
Mathematics Usage	15.84	17.56	18.02	19.30	4-3-2-1	4-1* 4-2* 4-3*	3-1* 2-1*
Social Studies Reading	17.27	18.63	19.49	19.99	4-3-2-1	4-1* 4-2*	3-1* 2-1*
Natural Sciences Reading	18.21	19.38	19.37	20.36	4-2-3-1	4-1* 4-3* 4-2*	2-1* 3-1*
Composite Score	17.00	18.74	18.74	19.58	4-3-2-1	4-1* 4-2* 4-3**	3-1* 2-1*

Group 1: Attended, did not graduate, and did not continue. (N-1468)
Group 2: Graduated and did not continue. (N-317)
Group 3: Attended, did not graduate, but transferred. (N-472)
Group 4: Graduated and transferred. (N-802)

*Significant at the 1 percent level
**Significant at the 5 percent level

APPENDIX

CHARGE TO THE MASTER PLANNING COMMISSION

1. Prepare a plan of the educational goals and objectives of Kansas for the area between the elementary secondary school system and the four year colleges and universities.

2. Project the educational needs of Kansas students and the needs of the state and its economy in this middle educational level through the mid 1980's.

3. Determine what the optimum role, financial structure, and school organization should be for:

   (a) Community junior colleges offering one or more of the following educational programs: Two year general, terminal, technical, occupational, and transfer type courses.

   (b) Vocational education schools offering general, occupational, vocational, and technical programs.

4. Propose the optimum organization for the coordination of all post high school institutions which are not under the Kansas Board of Regents, and recommend methods for the coordination of post high school institution programs with those of secondary schools and the public and private four year colleges and universities.

5. Indicate the impact of the first phase of the master plan on the capability of independent colleges and universities continuing to provide diversity of higher educational opportunities in the state.

   (a) Define what the role of the private colleges and universities should be as a part of the total education program of the State of Kansas.

   (b) Outline changes in the organization, relationships or financing of private institutions necessary to enable them to fulfill their role in the educational program of Kansas, and to preserve their educational freedom.

6. Submit recommendations regarding use of existing facilities, the need for additional institutions to adequately serve the needs of students, or the advisability of discontinuing any existing program or institution.

7. Indicate methods by which vocational, occupational, and technical education may achieve public recognition of the importance of its role in the economy of the state, in providing beneficial training to the majority of students who do not graduate from four-year colleges and universities, and how it may attain its proper place in the educational program of the State of Kansas.

8. Make findings and recommendations regarding the proper role, program, location, organization, and affiliation of special technical institutes, including the Kansas Technical Institute, Salina.

9. Estimate the cost of implementing and putting into effect the proposed master plan, and recommend methods for support and financing.

10. The plan should be innovative, comprehensive, and thorough, and should not be restricted to present statutes or constitutional provisions. It should not include detailed considerations of the conditions, design, location, and use of individual buildings.